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Data sheet 6GK7542-1AX10-0XE0

product type designation	**CM 1542-1**

CM 1542-1 communications module for connecting SIMATIC S7-1500 to PROFINET as IO Controller or IO Device, TCP/IP, ISO-on-TCP, UDP, S7 communication, IP broadcast multicast, SNMPV1, time synchronization via NTP, 2xRJ45 (100 Mbps).

product brand name	SIMATIC NET
Technical Product Detail Page	https://i.siemens.com/1P6GK7542-1AX10-0XE0
transfer rate	
transfer rate	
● at the 1st interface	100 Mbit/s
interfaces	
number of interfaces / according to Industrial Ethernet	1
number of electrical connections	
● at the 1st interface / according to Industrial Ethernet	2
type of electrical connection	
● at the 1st interface / according to Industrial Ethernet	RJ45 port
supply voltage, current consumption, power loss	
type of voltage / of the supply voltage	DC
supply voltage / 1 / from backplane bus	15 V
relative symmetrical tolerance / at DC	
● at 15 V	3 %
consumed current	
● from backplane bus / at DC / at 15 V / typical	0.22 A
power loss [W]	3.3 W
ambient conditions	
ambient temperature	
● for vertical installation / during operation	-30 ... +40 °C
● for horizontally arranged busbars / during operation	-30 ... +60 °C
● during storage	-40 ... +70 °C
● during transport	-40 ... +70 °C
● note	without condensation or icing
installation altitude / at height above sea level / maximum	5000 m
ambient condition / relating to ambient temperature - air pressure - installation altitude	restrictions for installation altitudes > 2 000 m, see manual
relative humidity	
● at 25 °C / without condensation / during operation / maximum	95 %
protection class IP	IP20
design, dimensions and weights	
module format	Compact module S7-1500 single width
width	35 mm
height	142 mm
depth	129 mm

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net weight	0.4 kg
fastening method	
● S7-1500 rail mounting	Yes
product features, product functions, product components / general	
number of units	
● per CPU / maximum	8
● note	depending on CPU type
performance data / open communication	
number of possible connections / for open communication	
● by means of T blocks / maximum	64; depending on the system upper limit
data volume	
● as user data per ISO on TCP connection / for open communication / by means of T blocks / maximum	65536 byte
number of Multicast stations	6
performance data / S7 communication	
number of possible connections / for S7 communication	
● maximum	64; depending on the system upper limit
performance data / multi-protocol mode	
number of active connections / with multi-protocol mode	64
performance data / PROFINET communication / as PN IO controller	
product function / PROFINET IO controller	Yes
number of PN IO devices / on PROFINET IO controller / operable / total	128
number of PN IO IRT devices / on PROFINET IO controller / operable	64
number of external PN IO lines / with PROFINET / per rack	10
data volume	
● as user data for input variables / as PROFINET IO controller / maximum	8 Kibyte
● as user data for output variables / as PROFINET IO controller / maximum	8 Kibyte
● as user data for input variables per PN IO device / as PROFINET IO controller / maximum	1433 byte
● as user data for output variables per PN IO device / as PROFINET IO controller / maximum	1433 byte
● as user data for input variables per PN IO device / for each sub-module as PROFINET IO controller / maximum	256 byte
● as user data for output variables per PN IO device / for each sub-module as PROFINET IO controller / maximum	256 byte
performance data / PROFINET communication / as PN IO device	
product function / PROFINET IO device	Yes
data volume	
● as user data for input variables / as PROFINET IO device / maximum	8192 byte
● as user data for output variables / as PROFINET IO device / maximum	8192 byte
● as user data for input variables / for each sub-module as PROFINET IO device	256 byte
● as user data for output variables / for each sub-module as PROFINET IO device	256 byte
● as user data for the consistency area for each sub-module	256 byte
number of submodules / per PROFINET IO-Device	32
performance data / telecontrol	
protocol / is supported	
● TCP/IP	Yes
product functions / management, configuration, engineering	
product function / MIB support	Yes
protocol / is supported	
● SNMP v1	Yes
● DCP	Yes
● LLDP	Yes
configuration software	

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● required	STEP 7 Professional V18 (TIA Portal) or higher
identification & maintenance function	
● I&M0 - device-specific information	Yes
● I&M1 - higher level designation/location designation	Yes
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022
product functions / diagnostics	
product function / web-based diagnostics	Yes; via S7-1500 CPU
product functions / switch	
product feature / switch	Yes
product function	
● switch-managed	No
● with IRT / PROFINET IO switch	Yes
● configuration with STEP 7	Yes
product functions / routing	
service / routing / note	IP routing up to 1 Mbps
product function	
● static IP routing	Yes
● static IP routing IPv6	No
● dynamic IP routing	No
● dynamic IP routing IPv6	No
protocol / is supported	
● RIP v1	No
● RIPv2	No
● RIPnG for IPv6	No
● OSPFv2	No
● OSPFv3 for IPv6	No
● VRRP	No
● VRRP for IPv6	No
● BGP	No
● PPP	No
● PPoE via DSL	No
product functions / redundancy	
product function	
● ring redundancy	Yes
● redundancy manager	Yes
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
product functions / security	
product function	
● switch-off of non-required services	Yes
● blocking of communication via physical ports	No
● log file for unauthorized access	No
product functions / time	
product function / SICLOCK support	Yes
product function / pass on time synchronization	Yes
protocol / is supported	
● NTP	Yes
standards, specifications, approvals	
certificate of suitability / CE marking	Yes
certificate of suitability / UKCA marking	Yes
certificate of suitability / cULus approval	Yes
certificate of suitability / KC approval	Yes
certificate of suitability / Regulatory Compliance Mark (RCM)	Yes
certificate of suitability / RoHS conformity	Yes
certificate of suitability / EAC approval	Yes
standards, specifications, approvals / hazardous environments / header	
certificate of suitability / ATEX	Yes
certificate of suitability / IECEx	Yes
certificate of suitability / ULhazloc approval	Yes

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certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
certificate of suitability / FM registration	Yes
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
● total	124.91 kg
● during manufacturing	21.24 kg
● during operation	103.32 kg
● after end of life	0.35 kg
further information / internet links	
internet link	
● to website: Selection guide for cables and connectors	https://support.industry.siemens.com/cs/ww/en/view/109766358
● to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
● to website: Industrial communication	https://www.siemens.com/simatic-net
● to web page: SiePortal	https://sieportal.siemens.com/
● to website: Image database	https://www.automation.siemens.com/bilddb
● to website: CAx-Download-Manager	https://siemens.com/cax
● to website: Industry Online Support	https://support.industry.siemens.com
security information	
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement - and continuously maintain - a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)

Approvals / Certificates

General Product Approval

China RoHS

EMV	For use in hazardous locations		Environment	Industrial Communication
	FM	CCC-Ex		PROFINET

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